

What is claimed is:

1. An optical semiconductor package comprising:

a substrate;

a chip disposed on the substrate and having an optical element;

a plurality of bonding wires for electrically connecting the chip to the substrate;

6 a window;

a supporter supporting the window for positioning the window corresponding to the optical element of the chip; and

an encapsulant formed on the substrate for fixing the window and encapsulating the chip and the bonding wires.

12 2. The optical semiconductor package as claimed in claim 1, wherein the encapsulant is formed by means of the overmolding process.

3. The optical semiconductor package as claimed in claim 1, further comprising paired snapping elements respectively disposed on the window and the supporter for snapping the window with the supporter.

4. The optical semiconductor package as claimed in claim 1, wherein the supporter further comprises a shoulder for supporting the window.

18 5. The optical semiconductor package as claimed in claim 1, wherein the window is a lens.

6. A method for manufacturing an optical semiconductor package, comprising the following steps of:

providing a substrate;

mounting a chip having an optical element on the substrate;

24 bonding a plurality of bonding wires to the chip and the substrate for electrically connecting the chip to the substrate;

providing a supporter;

disposing a window on the supporter;

mounting the supporter on the substrate;  
positioning the window corresponding to the optical element of the chip; and  
forming an encapsulant on the substrate for fixing the window and encapsulating the chip and the bonding wires.

6 7. The method as claimed in claim 6, wherein the encapsulant forming step further comprises the following step of:

overmolding the encapsulant.

8. The method as claimed in claim 6, further comprising the following step of:  
joining the window and the supporter together.

9. The method as claimed in claim 6, wherein the window is a lens.

12 10. An optical semiconductor package comprising:  
a substrate;  
a chip disposed on the substrate and having an optical element;  
a plurality of bonding wires for electrically connecting the chip to the substrate;  
a window mounted on the optical element of the chip;  
an encapsulant formed on the substrate for fixing the window and encapsulating the chip and the bonding wires.

18 11. The optical semiconductor package as claimed in claim 10, wherein the encapsulant is formed by means of the overmolding process.

12. The optical semiconductor package as claimed in claim 10, wherein the window further comprises a ledge for securing the window in the encapsulant.

13. The optical semiconductor package as claimed in claim 10, wherein the encapsulant is made of an opaque material.

24 14. The optical semiconductor package as claimed in claim 10, wherein the window is a lens.

15. The optical semiconductor package as claimed in claim 10, further comprising:

an adhesive for mounting the window on the optical element of the chip.

16. A method for manufacturing an optical semiconductor package, comprising the following steps of:

providing a substrate;

mounting a chip having an optical element on the substrate;

6 bonding a plurality of bonding wires to the chip and the substrate for electrically connecting the chip to the substrate;

mounting a window on the optical element of the chip; and

forming an encapsulant on the substrate for fixing the window and encapsulating the chip and the bonding wires.

12 17. The method as claimed in claim 16, wherein the encapsulant forming step further comprises the following step of:

overmolding the encapsulant.

18. The method as claimed in claim 16, wherein the window is a lens.

19. The method as claimed in claim 16, wherein the window mounting step further comprises the following step of:

18 providing an adhesive for mounting the window on the optical element of the chip.

20. An optical semiconductor package comprising:

a substrate;

a chip disposed on the substrate and having an optical element;

a plurality of bonding wires for electrically connecting the chip to the substrate;

a window;

24 a supporter supporting the window for positioning the window corresponding to the optical element of the chip;

an encapsulant formed on the substrate for hermetically fixing the supporter on the substrate.

21. The optical semiconductor package as claimed in claim 20, wherein the encapsulant is formed by means of the overmolding process.

22. The optical semiconductor package as claimed in claim 20, wherein the window is hermetically disposed on the supporter.

23. The optical semiconductor package as claimed in claim 20, wherein the  
6 encapsulant is made of an opaque material.

24. The optical semiconductor package as claimed in claim 20, wherein the window is a lens.